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10/076,778	02/13/2002	Ajay Mohindra	YO998-210X	4104

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EXAMINER
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NEURAUTER, GEORGE C

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/076,778

Applicant(s)

MOHINDRA ET AL.

Examiner

George C. Neurauter, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

Claims 11-18 and 20-22 are currently presented and have been examined.

***Response to Arguments***

Applicant's arguments filed 17 May 2005 have been fully considered but they are not persuasive.

The Applicant argues that Chess does not teach a bag buffer, as part of a program, with variable/value pairs for use in executing the program, the user inputting values during program execution but before the program needs the values. The Examiner is not persuaded by these arguments. As noted in the previous Office Action, the limitation "bag buffer" is interpreted by its broadest reasonable interpretation as required by MPEP 2111 as a buffer the hold variable/value pairs and the limitations "variable" and "value" are being interpreted by their plain meaning since these limitations were not given a clear definition within the specification. Chess discloses:

"We anticipate with most end users will not write their own agents...but that various classes of agents will be distributed by services for use by their subscribers or will be packaged with the client applications. The agent is initialized with the client's task..." (page 34, right column)

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"A mobile employee has a need to fly from New York City to Ausin, Texas on a Thursday evening...He uses a form or a dialogue to state his need. The application translates this need into a task expressed in an Agent Communication language, using a vocabulary standardized for travel reservations. This task specification is used to create an instance of a Transaction Agent in the portable computer. The Transaction Agent is a program, expressed in a script language, that is able to interact via an AMP with a transaction server, assess the results of the transaction, make a decision, and commit a purchase. The Transaction Agent is also given the user's preferences for travel reservations (expressed as rules)...The ability of the agent to migrate from place to place, accumulating information until it is able to complete its task." (page 36, right column-page 34, right column)

In view of the above disclosures in Chess, Chess discloses that a program or "agent" uses a buffer to which the user inputs the values or "the user's preferences" or "rules" during execution of the program but before the program needs the values or "The application translates this need into a task...this task...is used to create an instance of a[n]...agent...The [agent] is also given the user's preferences for travel reservations...the agent...accumulating information until it is

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able to complete its task." and using the values as a variable during agent execution by using the inputted value to fulfill a variable within the agent such as, in the example shown, by using New York City as the origin of the flight, Austin, Texas as the destination of the flight, and Thursday as the date of the flight so that these values are used during agent execution to purchase a flight with those values being used by the agent as variables to accomplish the specified task which, in the example shown, the agent being used for purchasing airline tickets for which values are not immediately known and the values provided by the user are given to the application which as disclosed in Chess.

The Applicant also argues that Chess does not teach updating or disposing of values in response to a request for variables by the program. The Examiner is not persuaded by this argument. Chess discloses these limitations as shown in the previous Office Action.

The Applicant also argues that Chess does not disclose a program state buffer. Chess discloses:

"When the agent has successfully completed its task at this server, it may collect its state..." (page 35, left column)

Therefore, Chess does disclose a program state buffer in the context of the claimed invention. See also page 41,

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specifically the section "Accumulated State". The Applicant argues that the program state buffer is used in conjunction with input, output, and bag buffers, however, any functionality of the program buffer with regard to this conjunctive relationship is not recited in the claims.

The Applicant argues that Chess does not teach automatically accessing variables. These limitations are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicant argues that the Examiner has not provided sufficient motivation to modify the teachings of Chess. The Examiner has shown that, although Chess does not teach the limitations of the claim, it still would have been obvious to one of ordinary skill in the art to achieve the limitations of the claim since the Applicant has not shown how the functionality of the claimed limitations would be advantageous over the teachings of Chess. Therefore, one of ordinary skill would have found it obvious to use any sort of means or method to achieve the limitations of the claim since the means or method disclosed in Chess would perform equally as well as the

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means or method recited in the claims and would not be patentably distinct from the teachings of the prior art.

***Claim Interpretation***

The element "bag buffer" defined on page 8, lines 20-23 of the specification and recited in claims 11-17 and 19-22 will be given its broadest reasonable interpretation and will be interpreted by the Examiner as a buffer that holds predetermined variable/value pairs that is consistent with the disclosures of the specification and the interpretation that those skilled in the art would reach. See MPEP § 2111.

The Applicant has not provided a clear definition for the terms "variable" or "value" recited in claims 11-22 within the specification. Therefore, the Examiner will interpret this element by its plain meaning as if the term was interpreted by one of ordinary skill in the art. See MPEP § 2111.01.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 11-13 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by "Iterant Agents for Mobile Computing" by Chess et al.

Regarding claim 11, Chess discloses a method for enabling a user to provide input values as variables to a running program (referred to throughout the reference as "iterant agent" or "Transaction Agent") after said program has begun running and before the program needs the input values, wherein user input values are substituted for program variables during program execution, comprising the steps of maintaining a bag buffer of variable/value pairs for use in executing the program in the program (page 34, right column, specifically "The agent is initialized with the user's task..."; page 39, paragraph "Goals and Status Information"; see also Figure 2); receiving a communication, including input values, from the user during program execution (page 36, right column, specifically "He uses a form or a dialogue to state his need"); and temporarily storing said input values for said variables as variable/value pairs in said bag buffer (page 34, right column, specifically "The agent is initialized with the user's task..."; page 36, right column, specifically "This task specification is used to create an instance of a Transaction Agent...The Transaction



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Agent is also given the user's preferences for travel reservations (expressed as rules)...").

Regarding claim 12, Chess discloses the method of claim 11 wherein said program subsequently performs a retrieving step wherein said program searches through contents of the bag buffer to locate needed input values before requesting input from said user. (page 37, left column, specifically "The agent...process[es] each of [the] candidates against the user's travel preferences...")

Regarding claim 13, Chess discloses the method of claim 12, wherein the retrieving step comprises the steps of searching, in the bag buffer, for input values associated with input variables requested by said program (page 37, left column, specifically "The agent...process[es] each of [the] candidates against the user's travel preferences...");

updating, if found, the input variables with the input values (page 37, right column, specifically "After ordering the candidates according to preference...");

disposing, in an input buffer, the input variables, if not found (page 37, right column, specifically "Whenever it finds a better candidate, it sends a message back to the server where it found the previous selection, releasing the hold it had requested. When it has examined a minimum number of

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candidates...it returns to the server the best candidate...");  
and

optionally notifying the user via electronic means if no suitable values are found in the bag buffer (page 47, left column, specifically the text "Because the client may not be connected when the agent's response is ready...the agent can make use of the Agent Status Services to indicate its status and await an indication from its client. Or it can alert the user by using the services of the predetermined AMP to send a "page" to the client").

Regarding claim 18, Chess discloses a computer program data structure for a mobile agent ("iterant agent" or "Transaction Agent"; Figure 2) executing a program at an agent execution shell at a computing location comprising:

an output buffer for storing program execution output values to be displayed to a user; (page 36, left column, the paragraph "An Information Dispersal/Retrieval Model, specifically "A client sends its agent...into the network to retrieve the latest version of a technical paper on "Agent Technologies"...In this case, the iterant agent serves as the courier...for data and program content")

an input buffer for storing values based on user input of values for variables required by said program, wherein user

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input values are substituted for program variables during program execution, said input buffer being accessed by said agent execution shell to communicate values for the input variables to the agent for present user by the agent during program execution (page 34, right column, specifically "The agent is initialized with the user's task..."; page 36, right column, specifically "He uses a form or a dialogue to state his need...This task specification is used to create an instance of a Transaction Agent...The Transaction Agent is also given the user's preferences for travel reservations (expressed as rules)..."); and

a program state buffer for storing at least the present state of said program. (page 35, left column, specifically "When the agent has successfully completed its task at this server, it may collect its state..."); and

a bag buffer for storing variable/value pairs for later use by said agent in executing said program. (page 34, right column, specifically "The agent is initialized with the user's task..."; page 39, paragraph "Goals and Status Information")

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 14-17 and 20-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Chess et al.

Regarding claims 14-17, Chess discloses the method of Claim 13.

Chess does not expressly disclose wherein the electronic means is a pager, beeper, electronic mail, or smart telephone, wherein the notifying comprises assembling and transmitting a message to said user.

It would have been obvious to one skilled in the art at the time the invention was made to assemble and transmit a message to an electronic means such as a pager, beeper, electronic mail, or smart telephone because the Applicant has not disclosed that using the limitations undisclosed in Chess provide any sort of an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with electronic means described in Chess as recited in the claim because the user is able to notified equally well with the method disclosed in Chess regardless of the type of means used to notify the user.

Regarding claims 20-22, Chess discloses the data structure of Claim 19.

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Chess does not expressly disclose wherein the bag buffer is a array data structure, hash table data structure, or a tuple space data structure.

It would have been obvious to one skilled in the art at the time the invention was made to use an array, hash table, or tuple space data structure because the Applicant has not disclosed that using the limitations undisclosed in Chess provide any sort of an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the computer program data structure described in Chess as recited in the claim because the manner in which the data is stored in the bag buffer disclosed in Chess would be stored in the computer program data structure equally well regardless of the type of bag buffer used.

#### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 5 749 081 to Whiteis;

US Patent 5 926 798 to Carter;

US Patent 6 427 142 to Zachary et al.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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